

=> d his

(FILE 'HOME' ENTERED AT 11:28:18 ON 14 NOV 2004)  
SET COST OFF

FILE 'REGISTRY' ENTERED AT 11:28:41 ON 14 NOV 2004

L1 21 S DFGLDCDEHSTESRCCR.\*CSGECEFVFLQKYPHTHLVHQANPRGSAGPCCTPTKMSPINM  
SAV L1 BEL031342/A

FILE 'HCAOLD' ENTERED AT 11:31:11 ON 14 NOV 2004

L2 0 S L1

FILE 'USPATFULL, USPAT2' ENTERED AT 11:31:15 ON 14 NOV 2004

L3 5 S L1

L4 4 S L3 NOT H01R009/ICM

FILE 'HCAPLUS' ENTERED AT 11:32:17 ON 14 NOV 2004

L5 12 S L1

L6 1 S L5 AND (HALKIER ? OR MOURITSEN ? OR KLYSNER ?)/AU

L7 1 S L1 AND (M(L)"E"(L)BIOTECH)/PA,CS

L8 8 S L5 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)

L9 8 S L6-L8

L10 4 S L5 NOT L9

=> fil uspatall

FILE 'USPATFULL' ENTERED AT 11:34:14 ON 14 NOV 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 11:34:14 ON 14 NOV 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l4 bib abs hitrn tot

L4 ANSWER 1 OF 4 USPATFULL on STN

AN 2003:314469 USPATFULL

TI Growth differentiation factor receptors, agonists and antagonists  
thereof, and methods of using same

IN Lee, Se-Jin, Baltimore, MD, United States

McPherron, Alexandra C., Baltimore, MD, United States

PA The Johns Hopkins University School of Medicine, Baltimore, MD, United  
States (U.S. corporation)

PI US 6656475 B1 20031202

AI US 2000-626896 20000727 (9)

RLI Continuation-in-part of Ser. No. US 485046

PRAI US 1997-54461P 19970801 (60)

DT Utility

FS GRANTED

EXNAM Primary Examiner: Eyler, Yvonne; Assistant Examiner: Andres, Janet L.

LREP Gray Cary Ware & Freidenrich, LLP, Haile, Lisa A., Imbra, Richard J.

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 3 Drawing Page(s)

LN.CNT 6570

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a substantially purified growth  
differentiation factor (GDF) receptor, including a GDF-8 (myostatin)  
receptor, as well as functional peptide portions thereof. In addition,  
the invention provides a virtual representation of a GDF receptor or a  
functional peptide portion thereof. The present invention also provides  
a method of modulating an effect of myostatin on a cell by contacting  
the cell with an agent that affects myostatin signal transduction in the  
cell. In addition, the invention provides a method of ameliorating the  
severity of a pathologic condition, which is characterized, at least in

## ALIGNMENTS

## RESULT 1

US-08-891-789B-2

; Sequence 2, Application US/08891789B

; Patent No. 6103466

; GENERAL INFORMATION:

; APPLICANT: Grobet, Luc; Georges, Michel

; TITLE OF INVENTION: Double-Muscling in Mammals

; NUMBER OF SEQUENCES: 52

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Blake, Cassels &amp; Graydon

; STREET: Box 25, Commerce Court West

; CITY: Toronto

; STATE: Ontario

; ZIP: M5L 1A9

; COUNTRY: Canada

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette, 3 1/2 inch, 1.4 Mb storage

; COMPUTER: COMPAQ, IBM PC compatible

; OPERATING SYSTEM: MS-DOS 5.1

; SOFTWARE: WORD PERFECT

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/891,789B

; FILING DATE: July 14, 1997

; ATTORNEY/AGENT INFORMATION:

; NAME: Hunt, John C.

; REGISTRATION NUMBER: 36,424

; REFERENCE/DOCKET NUMBER: 52836/00004

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 863-4344

; TELEFAX: (416) 863-2653

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 375 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

US-08-891-789B-2

Query Match

Best Local Similarity 100.0%; Score 515; DB 3; Length 375;

Matches 85; Conservative 24; Mismatches 0; Indels 0; Gaps 0;

QY 1 DFGLCDDEHSTESRCRXXXXXXXXXXXXXXXXXXXXXGCEGFVFLQKYPHTL 60

DB 267 DFGLCDDEHSTESRCRYPPLTVDFEAFGMDWIAPKRYKANYSGECEFVFLQKYPHTL 326

QY 61 VHOANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 109

DB 327 VHOANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 375

## RESULT 2

US-09-252-149B-2

; Sequence 2, Application US/09252149B

; Patent No. 6369201

; GENERAL INFORMATION:

; APPLICANT: Barker, Christopher A.

; APPLICANT: Morsey, Mohamad

; TITLE OF INVENTION: IMMUNOLOGICAL METHODS TO MODULAR MYOSTATIN IN

; FILE REFERENCE: 9001-0042

; CURRENT APPLICATION NUMBER: US/09/252,149B

; CURRENT FILING DATE: 1999-02-18

; PRIOR APPLICATION NUMBER: 60/075,213

; PRIOR FILING DATE: 1998-02-19

; NUMBER OF SEQ ID NOS: 39

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 2

; LENGTH: 375

; TYPE: PRT

; ORGANISM: bos taurus

US-09-252-149B-2

Query Match

Best Local Similarity 100.0%; Score 515; DB 3; Length 375;

Matches 85; Conservative 24; Mismatches 0; Indels 0; Gaps 0;

QY 1 DFGLCDDEHSTESRCRXXXXXXXXXXXXXXXXXXXXXGCEGFVFLQKYPHTL 60

DB 267 DFGLCDDEHSTESRCRYPPLTVDFEAFGMDWIAPKRYKANYSGECEFVFLQKYPHTL 326

QY 61 VHOANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 109

DB 327 VHOANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 375

## RESULT 3

US-09-252-149B-31

; Sequence 31, Application US/09252149B

; Patent No. 6369201

; GENERAL INFORMATION:

; APPLICANT: Barker, Christopher A.

; APPLICANT: Morsey, Mohamad

; TITLE OF INVENTION: IMMUNOLOGICAL METHODS TO MODULAR MYOSTATIN IN

; FILE REFERENCE: 9001-0042

; CURRENT APPLICATION NUMBER: US/09/252,149B

; CURRENT FILING DATE: 1999-02-18

; PRIOR APPLICATION NUMBER: 60/075,213

; PRIOR FILING DATE: 1998-02-19

; NUMBER OF SEQ ID NOS: 39

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 31

; LENGTH: 375

; TYPE: PRT

; ORGANISM: bos taurus

US-09-252-149B-31

Query Match

Best Local Similarity 100.0%; Score 515; DB 3; Length 375;

Matches 85; Conservative 24; Mismatches 0; Indels 0; Gaps 0;

QY 1 DFGLCDDEHSTESRCRXXXXXXXXXXXXXXXXXXXXXGCEGFVFLQKYPHTL 60

DB 267 DFGLCDDEHSTESRCRYPPLTVDFEAFGMDWIAPKRYKANYSGECEFVFLQKYPHTL 326

QY 61 VHOANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 109

DB 327 VHOANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 375

## RESULT 4

US-09-686-344-21

; Sequence 21, Application US/09686344

; Patent No. 6607884

; GENERAL INFORMATION:

; APPLICANT: Lee, Se-Jin

; APPLICANT: McPherron, Alexandra C.

; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8

; FILE REFERENCE: 07265/144001

; CURRENT APPLICATION NUMBER: US/09/686,344

; CURRENT FILING DATE: 2000-10-10

; PRIOR APPLICATION NUMBER: 08/862,445

; PRIOR FILING DATE: 1997-05-23

; PRIOR APPLICATION NUMBER: 08/847,910

; PRIOR FILING DATE: 1997-04-28

; PRIOR APPLICATION NUMBER: 08/795,071

; PRIOR FILING DATE: 1997-02-05

; PRIOR APPLICATION NUMBER: 08/525,596

; PRIOR FILING DATE: 1995-10-26

; PRIOR APPLICATION NUMBER: PCT/US94/03019

; PRIOR FILING DATE: 1994-03-18  
; PRIOR APPLICATION NUMBER: 08/033,923  
; PRIOR FILING DATE: 1993-03-19  
; NUMBER OF SEQ ID NOS: 51  
; SOFTWARE: FastSeq for windows Version 4.0  
; SEQ ID NO 21  
; LENGTH: 375  
; TYPE: PRT  
; ORGANISM: Bovine  
US-09-686-344-21

Query Match 100.0%; Score 515; DB 4; Length 375;  
Best Local Similarity 78.0%; Pred. No. 4.4e-38;  
Matches 85; Conservative 24; Mismatches 0; Indels 0; Gaps 0;

OY 1 DFGLCDCEHSTESRCCXXXXXXXXXXXXXXXXXXXXXGSGCEFFVFLQKYPHTL 60  
DB 267 DFGLCDCEHSTESRCCRYPLTVDFEAFGMDWIAPKRYKANYCSGCEFFVFLQKYPHTL 326  
OY 61 VHQANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 109  
DB 327 VHQANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 375

## RESULT 5

US-09-626-896-12  
; Sequence 12, Application US/09626896  
; Patent No. 6656475  
; GENERAL INFORMATION:  
; APPLICANT: Lee, Se-Jin  
; APPLICANT: McPherson, Alexandra C.  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR RECEPTORS,  
; TITLE OF INVENTION: AGONISTS AND ANTAGONISTS THEREOF, AND METHODS OF USING SAME  
; FILE REFERENCE: JHU1470-2  
; CURRENT APPLICATION NUMBER: US/09/626,896  
; CURRENT FILING DATE: 2000-07-27  
; PRIOR APPLICATION NUMBER: 09/485,046  
; PRIOR FILING DATE: 2000-01-31  
; PRIOR APPLICATION NUMBER: PCT/US98/15598  
; PRIOR FILING DATE: 1998-07-28  
; PRIOR APPLICATION NUMBER: 60/054,461  
; PRIOR FILING DATE: 1997-08-01  
; NUMBER OF SEQ ID NOS: 29  
; SOFTWARE: FastSeq for windows Version 4.0  
; SEQ ID NO 12  
; LENGTH: 375  
; TYPE: PRT  
; ORGANISM: Bovine  
US-09-626-896-12

Query Match 100.0%; Score 515; DB 4; Length 375;  
Best Local Similarity 78.0%; Pred. No. 4.4e-38;  
Matches 85; Conservative 24; Mismatches 0; Indels 0; Gaps 0;

OY 1 DFGLCDCEHSTESRCCXXXXXXXXXXXXXXXXXXXXXGSGCEFFVFLQKYPHTL 60  
DB 267 DFGLCDCEHSTESRCCRYPLTVDFEAFGMDWIAPKRYKANYCSGCEFFVFLQKYPHTL 326  
OY 61 VHQANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 109  
DB 327 VHQANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 375

## RESULT 6

US-09-485-046-8  
; Sequence 8, Application US/09485046  
; Patent No. 6696260  
; GENERAL INFORMATION:  
; APPLICANT: The Johns Hopkins University School of Medicine  
; APPLICANT: Lee, Se-Jin  
; APPLICANT: McPherson, Alexandra  
; TITLE OF INVENTION: METHODS TO IDENTIFY GROWTH DIFFERENTIATION FACTOR (GDF) RECEPTORS  
; FILE REFERENCE: JHU1470-1

; CURRENT APPLICATION NUMBER: US/09/485,046  
; CURRENT FILING DATE: 2000-05-05  
; PRIOR APPLICATION NUMBER: PCT/ US98/15598  
; PRIOR FILING DATE: 1998-07-28  
; PRIOR APPLICATION NUMBER: US 06/054,461  
; PRIOR FILING DATE: 1997-08-01  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: PatentIn version 3.0  
; SEQ ID NO 8  
; LENGTH: 375  
; TYPE: PRT  
; ORGANISM: Bovine  
US-09-485-046-8

Query Match 100.0%; Score 515; DB 4; Length 375;  
Best Local Similarity 78.0%; Pred. No. 4.4e-38;  
Matches 85; Conservative 24; Mismatches 0; Indels 0; Gaps 0;

OY 1 DFGLCDCEHSTESRCCXXXXXXXXXXXXXXXXXXXXXGSGCEFFVFLQKYPHTL 60  
DB 267 DFGLCDCEHSTESRCCRYPLTVDFEAFGMDWIAPKRYKANYCSGCEFFVFLQKYPHTL 326  
OY 61 VHQANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 109  
DB 327 VHQANPRGSAGPCTPTKMSPINMLYFNGEGQIIYGKIPAMVVDRCGCS 375

## RESULT 7

US-08-525-596B-6  
; Sequence 6, Application US/08525596B  
; Patent No. 5827733  
; GENERAL INFORMATION:  
; APPLICANT: Huynh, Thanh  
; APPLICANT: Lee, Se-Jin  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSEE: Fish & Richardson P.C.  
; STREET: 4225 Executive Square, Suite 1400  
; CITY: La Jolla  
; STATE: CA  
; COUNTRY: US  
; ZIP: 92037

COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: Windows95  
; SOFTWARE: FastSeq for windows Version 2.0  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/525,596B  
; FILING DATE: 19-SEP-1995  
; CLASSIFICATION: 514

PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: PCT/US94/07762  
; FILING DATE: 08-JUL-1994  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Wetherell, Jr., Ph.D, John R.  
; REGISTRATION NUMBER: 31,678  
; REFERENCE/DOCKET NUMBER: 07265/075001  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 619-678-5070  
; TELEFAX: 619-678-5099

INFORMATION FOR SEQ ID NO: 6:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 126 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear

MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-525-596B-6

Query Match 97.7%; Score 503; DB 2; Length 126;  
Best Local Similarity 76.1%; Pred. No. 6.7e-38;